

We claim:

1. A method of treating a patient, said method comprising the steps of:

performing surgery within the chest of the patient;

5 providing a cardiac massage device adapted for cardiac massage from within the chest of the patient;

inserting the cardiac massage device into the patient between the sternum and the heart, and positioning the cardiac massage device so that when operated the cardiac
10 massage device will compress the heart;

leaving the cardiac massage device in the patient after completing the surgery;

conditionally, operating the cardiac massage device to massage the heart of the patient if the patient suffers
15 cardiac arrest after the surgery; and

removing the cardiac massage device after a perioperative period.

2. A method of treating a patient, said method comprising the steps of:

20 performing surgery within the chest of the patient;

providing a cardiac massage device adapted for cardiac massage from within the chest of the patient, said device comprising:

25 a balloon adapted to assume an inflated state and a deflated state, wherein the balloon has a

configuration sized and dimensioned to compress the heart when said balloon is inflated within the chest of the patient;

5 a supply of fluid operably connected to the balloon and to a means for delivering fluid, said means for delivering operable to deliver fluid from the supply to the balloon;

10 inserting the balloon into the patient between the sternum and the heart, and positioning the balloon so that when inflated the balloon will compress the heart;

leaving the balloon in the patient after completing the surgery; and

15 conditionally, operating the means for delivering fluid to repeatedly inflate and deflate the balloon if the patient suffers cardiac arrest after the surgery.

3. The method of claim 2 wherein the step of providing a device further comprises providing a means for removing the balloon operably attached to the balloon, and wherein the method comprises the further step of removing the balloon from the 20 patient after a perioperative period.

4. The method of claim 3 wherein the step of removing the balloon is performed without opening the chest of the patient.

5. The method of claim 2 wherein the step of performing surgery within the chest comprises performing open chest 25 surgery.

6. The method of claim 5 wherein the step of providing a device further comprises providing a means for removing the balloon operably attached to the balloon, and wherein the method

comprises the further step of removing the balloon from the patient after a perioperative period.

7. The method of claim 6 wherein the step of removing the balloon is performed without opening the chest of the patient.

5 8. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a diamond shaped balloon for insertion into the sternocostal space of a patient, said diamond shaped balloon having an anterior surface and a posterior surface and a center axis running through the upper
10 and lower points of the diamond shaped balloon, the posterior surface of the diamond shaped balloon having rails which bulge posteriorly from the major portion of the diamond shaped balloon and are roughly parallel to the center axis.

15 9. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a diamond shaped balloon for insertion into the sternocostal space of a patient, said diamond shaped balloon having an anterior surface and a posterior surface, the posterior surface of the diamond shaped balloon having pleats adapted to extend posteriorly from the
20 diamond shaped balloon.

10. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a balloon wherein the balloon in its inflated shape is characterized by an anterior surface and a posterior surface, said posterior surface facing the heart when the balloon is in place and inflated between the sternum and the heart, said posterior surface further characterized by a palmate shape.
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11. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a balloon

wherein the balloon in its inflated shape is characterized by an anterior surface and a posterior surface, said posterior surface facing the heart when the balloon is in place and inflated between the sternum and the heart, said posterior surface
5 further characterized by a convex shape.

12. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a balloon having a shape corresponding to the shape of a manta ray.

13. The method of claim 2 wherein the step of providing a
10 device comprising a balloon comprises providing a balloon having a shape corresponding to the shape of a pillow.

14. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a balloon having a spherical shape.

15 15. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a balloon having a bulbous shape.

16. The method of claim 2 wherein the step of providing a device comprising a balloon comprises providing a balloon
20 characterized by a distal portion and a proximal portion, said balloon having a pull tab disposed on the distal portion of the balloon.

17. The method of claim 2 wherein the step of providing a device comprises the further step of providing a rigid insertion
25 rod attached to the balloon.

18. The method of claim 17 wherein the step of providing a rigid insertion rod comprises providing a rigid insertion rod

having a bend therein of approximately 15 degrees from the plane of the balloon.

19. The method of claim 2 wherein the step of providing a device further comprises providing an automatic inflation system
5 operatively attached to the means for delivering fluid, said automatic inflation system operable to repeatedly inflate and deflate the balloon.